

Electronic medical documentation in medical rescue

(Elektroniczna dokumentacja medyczna w ratownictwie medycznym)

J Wypyszewska ^{1,A,D}, A Romaszewski ^{1,F,C}, Z Kopański ^{1,E}, M Głowacka ^{2,B}, M Mazurek ^{3,B},
J Rowiński ^{3,B,C}, W Ptak ^{3,B}

Abstract – The paper discusses the system of *Command Supporting System of Emergency Medical Services in Poland*. Attention is drawn to the way of keeping medical records related to the receipt of calls by dispatchers (from the Emergency Notification Centre), disposition of the Emergency Medical Services, exchange of data between entities participating in rescue operations, handling events requiring assistance, as well as determining the graphical location of the place from which assistance was called, ambulance and the ends of the network and telecommunications data of the person calling for assistance. The features of paper and electronic medical records prepared by the Office of the Medical Council were discussed.

Key words - *Command Supporting System of Emergency Medical Services*, EMT, electronic documentation.

Streszczenie – W pracy omówiono system wspomagania dowodzenia w ratownictwie medycznym w Polsce. Zwrócono uwagę na sposób prowadzenia dokumentacji medycznej związanej z przyjmowaniem przez dyspozytorów zgłoszeń (z centrum powiadamiania ratunkowego), dysponowaniem ZRM, wymianą danych pomiędzy podmiotami biorącymi udział w działaniach ratunkowych, obsługą zdarzeń wymagających udzielenia pomocy, a także określaniem lokalizacji graficznej miejsca, z którego wezwano pomoc, karetę oraz zakończeniami sieci i danymi telekomunikacyjnymi osoby wzywającej pomoc. Omówiono cechy dokumentacji medycznej papierowej i elektronicznej sporządzanej przez ZRM.

Słowa kluczowe – system wspomagania dowodzenia w ratownictwie medycznym, ZRM, dokumentacja elektroniczna.

Author Affiliations:

1. Faculty of Health Sciences, Collegium Medicum, Jagiellonian University
2. Laboratory of Clinical Skills and Medical Simulation, Ludwik Rydygier Collegium Medicum in Bydgoszcz Nicolaus Copernicus University in Toruń, Poland
3. Collegium Masoviense – College of Health Sciences, Żyrardów

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- A. The idea and the planning of the study
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- C. The data analysis and interpretation
- D. Writing the article
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- F. Final approval of the article

Correspondence to:

Prof. Zbigniew Kopański MD PhD, Faculty of Health Sciences, Collegium Medicum, Jagiellonian University, P. Michałowskiego 12 Str., PL- 31-126 Kraków, Poland, e-mail: zkopanski@o2.pl

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I. ELECTRONIC PATIENT RECORD IN THE MEDICAL EMERGENCY

All data regarding patients in life-threatening condition are recorded by EMT personnel in the form of medical records, also made in an electronic version, these data are therefore part of the *patient's electronic record* [1].

II. POWER SUPPORT SYSTEM OF STATE MEDICAL EMERGENCY¹

Keeping complete medical documentation in Emergency Medical Services is possible thanks to the existence of the *System Powiadamiania Ratunkowego - Emergency Notification System (abbreviated as SPR)* and *System Wspomagania Dowodzenia Państwowego Ratownictwa Medycznego - System for Supporting argumentation of the State Emergency Medical Services* [2].

Within SPR, SWD PRM was organized, as well as similar systems used, among others by the Police and the State Fire Service [3]. The mutual exchange of information between these entities is possible due to the functioning of the ICT system (operating within the SPR, composed of centers), the tasks of which are qualification of applications, selection of relevant entities obliged to provide assistance in a given case and providing them with necessary data. The system operates round the clock in the main and backup centers where data and copies are processed. In addition, the system provides the ability to identify users, guarantees the security of data contained in it, and also allows the training of operators. The features of the system include the ability to collect data not only for statistical purposes, but also to determine the type and location of the event, the type of entity granting assistance and the stage of activities. The system also exchanges up-to-date information on the content of the alarm notification. Thanks to the functioning of the system, it is possible to exchange information such as the exact time of receipt of the notification, data enabling the operator's identification, location of the event or place from which the call was made and the person calling (along with his/her name, surname and telephone number), type of event, data identifying the entity obliged to provide assistance, the number of patients, as well as data allowing for contact between the dispatcher and the operator. All data regarding reports via emergency call numbers are stored in the system for 3 years [3-6].

SWD PRM (cooperating with SPR) is to enable dispatchers to receive reports (from the emergency call center), to dispose of EMT, exchange data between entities involved in rescue operations, handle events requiring assistance, and determine the graphic location of: the place from which assistance was called, ambulances, endings of the network and telecommunications data of the person requesting help. In addition, through the system, it is possible to collect data for statistical purposes and to maintain a list of resources available to EMT's holders. As part of

SWD PRM, medical documentation is prepared containing data on the activities carried out. Copies of documents are also produced to protect data from loss due to a system failure. The system also enables training for medical dispatchers. It is available 24 hours a day, and all data contained in it can be made available to other systems, e.g. they are transferred to the Information System in Health Care. Access to them can be obtained by prosecutors, courts, the Police and NFZ (*National Health Fund*) [7]. If it is impossible for one medical dispatcher to perform his duties, the system provides the possibility of taking over them by another dispatcher. In addition, SWD PRM records data regarding dispatcher's work even in the event of a failure that prevents the transfer of information. In order to guarantee the continuity of the system operation and the security of the data contained therein, in addition to the main center where they are processed, the system also works in a backup center [2,3,7].

The advantages resulting from the operation of SPR and SWD PRM can include, among others shortening the time necessary for the EMT's disposal, leaving the ambulance, arrival of the team to the patient and the ability of the dispatcher to control each stage of the conducted activities, which has a significant impact on the speed of helping the patient [8,9].

SWD PRM in the future is to ensure the possibility of reciprocal taking over duties by medical dispatchers (in the event of breakdown), preparing reports for the NFZ, preparing dispatches by EMT medical air dispatchers (LZRM), communication between EMT members and the dispatcher or physician who coordinates the system and teletransmission of data describing patient's physiological parameters from ambulance to A&E², to which the patient will be transported [10].

The minister of public administration is responsible for controlling the functioning of the SPR and SWD PRM [4,6,11].

III. MEDICAL DOCUMENTATION AND ELECTRONIC MEDICAL DOCUMENTATION IN EMT

Medical records in EMT are prepared in both paper version and electronic version [12].

EMT's holders are required to prepare a collective documentation which is the register of the EMT dispatcher and individual documentation, which consists of: EMT trip

¹ SWD PRM

² Hospital Emergency Department - SOR

order card, MCR card,³, as well as air EMT medical card. Collective documentation is not carried out in the absence of employees in the positions of medical dispatchers [12]. The book kept by the ZRM (*Medical Rescue Team*) dispatchers must contain data allowing identification of the entity providing assistance, the type of ZRM sent, the patient (along with the telephone number if it is possible to obtain it) and the person calling for help, as well as the exact date, time, place and reason. call. In addition, this information should include data on the exact time of delivery of the order to the team and the time of its departure, information about the procedure recommended by the dispatcher (in the case of refusal to ZRM), as well as the dispatcher who accepted the call (code or first and last name) with the signature) [12,13].

The ZRM trip order card contains the data of the dispatcher and the dispatcher's receiving request, the date and time of receipt of the notification, information characterizing the place of the incident (including geographical coordinates) and the reason for the summons (together with the urgency code). In addition, the card contains data of the patient (surname and first name, sex and age) and the person calling, as well as data describing decisions taken by the medical dispatcher (eg about the ZRM) and allowing identification of the team sent to the site. The document also has data on the implementation by ZRM of the order, the patient's statement about the lack of consent to transport to the hospital or assistance, data on death (if it happened), equipment disinfection, procedures and identification of the team's director, as well as information on the provision of medical documentation in the form of a MCR card [12]. The model of the discussed card is Annex 1.

The MCR card also contains data allowing identification of the administrator, type of EMT and its manager, as well as the place of the event. In addition, the card records information obtained from a physical examination (interview) and the subject, as well as the result of the patient's awareness assessment. The document also contains information about the diagnosis made by the team, medical procedures, medical devices and medicines used, as well as data identifying the patient and informing about his transfer to another entity. The MCR card is made in 2 copies, one of which is intended for the patient or passed to the medical entity to which the patient has been transported [12,14]. The medical card prepared by LZRM contains data of the dispatcher, dispatcher, team, information on the request (along with the type of mission) and the patient. In addition, the document records information about the patient's tests, procedures and physiological parameters, monitored both by

LZRM and before his arrival. The card also has a place for a verbal characterization of the patient's condition and the diagnosis made, as well as a statement about the patient's disagreement with the transport and the help given by the members of the team. At the end of the document there is information on the transfer of the patient [12-14].

Medical rescuers are entitled to inspect medical records describing the patient's health status in the scope enabling them to provide help. All information obtained by them must be kept secret [7]. Medical documentation prepared by ZRM in both paper and digital versions is subject to the same legal regulations as documentation produced by other entities providing health services. These regulations do not apply to data obtained by a medical dispatcher during a telephone conversation with a person calling for help [12,15].

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³ Medical Rescue Operations

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